

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously Presented) A method for forming a bump, comprising:
forming a resist layer that defines a through hole which overlaps at least a portion of a pad;
forming an opening in an insulating film after forming the resist layer, the opening exposing at least a part of the pad; and
forming a metal layer constituting a bump after forming the opening, the metal layer connected to the portion of the pad exposed at the opening.
2. (Original) The method for forming a bump according to claim 1, the through hole being formed so as not to protrude from a periphery of the pad.
3. (Original) The method for forming a bump according to claim 1, the insulating film being thicker at an end of the pad than at a center of the pad.
4. (Currently Amended) The method for forming a bump according to claim 3, the through hole being formed at an ~~inner side of a~~interior periphery of the pad and at an ~~outer side of the center~~a larger portion of the pad, ~~in which~~where the insulating film is thinner.
5. (Original) The method for forming a bump according to claim 1, the metal layer including a first metal layer and a second metal layer formed on the first metal layer.
6. (Original) The method for forming a bump according to claim 5, the opening being formed so as to be larger than a periphery of the through hole so as to define a region for forming the first metal layer and an exposed portion of the pad, the second metal layer being formed so as to cover the exposed portion of the pad.

7. (Original) The method for forming a bump according to claim 5, the first metal layer being formed in the through hole, the resist layer being removed, and then the second metal layer being formed so as to cover the first metal layer.

8. (Original) The method for forming a bump according to claim 5, the first metal layer being formed in the through hole, and then the second metal layer being formed on the first metal layer without removing the resist layer.

9. (Previously Presented) The method for forming a bump according to claim 5, the first metal layer being formed so as to protrude from the through hole so that the first metal layer has a tip having a width which is larger than a width of the through hole.

10. (Previously Presented) The method for forming a bump according to claim 5, the second metal layer being formed so as to protrude from the through hole so that the second metal layer has a tip having a width which is larger than a width of the through hole.

11. (Original) The method for forming a bump according to claim 5, the first metal layer being formed by electroless plating.

12. (Original) The method for forming a bump according to claim 5, the second metal layer being formed by electroless plating.

13. (Original) The method for forming a bump according to claim 1, further comprising the step of providing a solder on the metal layer.

14. (Original) The method for forming a bump according to claim 13, the step of providing the solder includes providing a resin layer at a periphery of the metal layer other than on at least an upper face of the metal layer so that the solder is provided at a portion of the metal layer that is exposed from the resin layer.

15. (Original) The method for forming a bump according to claim 13, the metal layer being formed so as to be substantially flush with the resist layer, and the solder being provided at a portion of the metal layer exposed from the resist layer.

16. (Original) The method for forming a bump according to claim 8, the first metal layer being formed so as to be lower than the resist layer, and the second metal layer being provided by a printing process using the resist layer as a mask.

17. (Original) The method for forming a bump according to claim 8, further including the step of forming a conductive film on the insulating material so as to be electrically connected to the first metal layer at a periphery of the through hole, the first metal layer being formed so as to be lower than the resist layer, and the second metal layer being provided by electroplating using the conductive film as an electrode.

18. (Original) The method for forming a bump according to claim 5, the first metal layer including a nickel-containing material.

19. (Original) The method for forming a bump according to claim 5, the second metal layer including a gold-containing material.

20. (Original) The method for forming a bump according to claim 5, the second metal layer including a solder.

21. (Original) The method for forming a bump according to claim 13, the solder including Sn, or Sn and at least one metal selected from the group consisting of Ag, Cu, Bi, and Zn.

22. (Original) The method for forming a bump according to claim 12, the second metal layer including first and second Au layers, the first Au layer being formed on the first metal layer by immersion plating, and the second Au layer being formed on the first Au layer by autocatalytic plating.

23. (Original) The method for forming a bump according to claim 12, the second metal layer including an Au layer and a Sn layer, the Au layer being formed on the first metal layer by immersion plating, and the Sn layer being formed on the Au layer by autocatalytic plating.

24. (Original) The method for forming a bump according to claim 23, the step of forming the Sn layer includes forming the Sn layer with an electroless tin plating solution that contains at least one of Cu and Ag so as to deposit Sn and at least one of Cu and Ag.

25. (Original) A method for manufacturing a semiconductor device, comprising the method for forming a bump according to claim 1, the metal layer being formed on the pad formed in a semiconductor chip.

26. (Currently Amended) The method for making a semiconductor device according to claim 25, further including the step of electrically connecting the bump to a lead, ~~the second metal layer in the bump and the lead thereby forming an eutectic crystal.~~

27. (Original) A semiconductor device manufactured by a method for making a semiconductor device according to claim 25.

28. (Canceled)

29. (Canceled)

30. (Canceled)

31. (Original) A circuit board, comprising: the semiconductor device according to claim 27.

32. (Original) An electronic device, comprising: the semiconductor device according to claim 27.